

IMPHY UGINE PRECISION

MASKING DEVICE FOR A FLAT-SCREEN COLOUR-DISPLAY CATHODE-RAY TUBE WITH A TENSIONED SHADOW MASK MADE OF Fe-Ni ALLOYS

Abstract

Masking device for a flat-screen colour-display cathode-ray tube, comprising a support frame for a tensioned shadow mask and a tensioned shadow mask. The support frame is made of a hardened Fe-Ni alloy having a thermal expansion coefficient between 20°C and 150°C of less than $5 \times 10^{-6} \text{ K}^{-1}$ and a yield stress $R_{p0.2}$ at 20°C of greater than 700 MPa; the tensioned shadow mask is made of an Fe-Ni alloy having a thermal expansion coefficient between 20°C and 150°C of less than $3 \times 10^{-6} \text{ K}^{-1}$; the Fe-Ni alloys are chosen so that: below a temperature T_1 , the mean expansion coefficient α_{20-T} , between 20°C and T, of the alloy of the support frame is greater than the mean expansion coefficient α_{20-T} of the alloy of the shadow mask, and above T_1 the coefficient α_{20-T} of the alloy of the frame is less than the coefficient α_{20-T} of the alloy of the shadow mask, where $T_1 < 350^\circ\text{C}$ and preferably $< 300^\circ\text{C}$.

Figure for the abstract: none